

## Abstract

A circuit for lowering the effective voltage drop of a semi-conductor diode. The circuit includes a first Metal Oxide Semi-conductor (MOS) device connected in parallel with the diode. A bias voltage which is close to but lower than the threshold voltage is applied to the MOS device. When a forward voltage is applied to the diode, this voltage is added to the source to drain voltage of the MOS device which turns it on. The MOS device then bypasses the diode to effectively overcome the inherent forward voltage drop of the diode. The circuit is advantageously applied to a rectifier circuit to reduce input voltage requirements and improve the efficiency of the rectifier.